

REMARKS**Rejection of Claims on Art Grounds in the 05/21/2003 Office Action, and Traversal
Thereof**

In the 21 May 2003 Office Action, claims 1-31 have been rejected to under 35 U.S.C. 112, 35 U.S.C. 102(b), and 35U.S.C.103(a) as follows:

Claims 1 -31 are rejected under 35 USC 112.

Claims 1, 5, 6, 8, 9, 14, 20, and 24-27 are rejected under 35 USC 102(b) as being anticipated by Donahue and Veloz.

Claims 1-31 are rejected under 35 USC103 as being obvious under Saveliev in view of Donahue and Veloz.

The above rejections of the claims 1-31 on the stated art grounds are traversed, and consideration of the patentability of the claims 1-31 is requested, in light of the ensuing remarks.

ARGUMENTS FOR PATENTABILITY**112 rejections:**

While the applicant has provided corrected drawings to address the examiner's objection to the drawings, the applicant asserts that the drawings, when taken with the specification, as properly provided within the patent rules, provides sufficient description as to enable one of ordinary skill in the art to make or use the invention. The drawings are provided in order to assist one of ordinary skill in the art, as necessary, to understand the invention as set forth in text in the specification and claims. Applicant asserts that, while the drawings include block diagramming, it is for the purpose of permitting the reader of ordinary skill in the art to appreciate the possibility of substituting a variety of optical components for the at least one portal optical component, listed as being in the

group consisting of reflectors, shutters, lenses, splitters, focalizers, mirrors, rigid and flexible light guides, homogenizer, mixing rods, manifolds, couplers, filters, gratings, diffractors, color wheels, and combinations thereof, without having to unduly provide an overwhelming number of drawings that will not, in and of themselves, provide additional needed information to one of ordinary skill who would appreciate that, while these components may vary in size, shape, and structure, that the substitution of components for the block element(s) shown in the drawing, when taken with the prior art available to date for making the substitution and to structurally render them cooperative. The prior art references cited by the examiner provide some of the details available to one of ordinary skill in the art, such that the detailed rendering within a drawing or figure for each of the components is not necessary to permit an understanding of the invention.

102 and 103 rejections:

The prior art cited and relied upon by the examiner nowhere teaches the use of interface or portal optics, as set forth in the now amended claims 1 and 20, for provided focused, controlled UV light into the interior of a container for sterilizing the interior and the contents of the container.

Neither Donahue nor Veloz teaches the use of an interface device that includes an optical device for enhancing the focus and control of the UV light output into the interior of the container or housing. The quartz plates of these *prior art references do not serve, and are nowhere disclosed or taught or suggested to serve the function of focusing the light output, as taught and claimed in the present invention.*

Furthermore, in all cases cited and relied upon by the examiner, the housing of the prior art and UV sterilization is directed to fluid-filled housings or containers only. The present invention provide for the application to a variety of appliance types, as set forth hereinbelow.

Donahue discloses an oil reclaiming apparatus which removes particle and volatile contaminants from the oil and which also sterilizes the oil (Summary of the Invention).

While the examiner makes rejection under section 103 of claims 1-31 on the assertion that the invention of Saveliev when combined with either Donahue or Veloz renders the

present invention obvious to one of ordinary skill in the art at the time of the invention, the applicant argues that it is improper to combine the fiber optic transmission lines of Donahue or Veloz, as it renders the inventions of Donahue and Veloz non-functional. The apparatus of Donahue provides no space to add or combine fiber optic transmission lines, which would be fouled or soiled by the oil being sterilized. Additionally, there is no functional space in Veloz where fiber optic transmission lines may be added between the light source and the output for providing effective disinfection or sterilization of the fluid in the tank of Veloz. As such, the use of fiber optic transmission lines is not obvious with the combination of references used by the examiner, and claims 2-4 are asserted to be in allowable condition.

Furthermore, claim 7 of the present invention is directed to an animal housing; neither Donahue or Veloz are appropriate systems for an animal housing, as both are directed to fluid containing tanks and are therefore sealed or sealable to prevent any leakage of the fluids contained therein. As such, claim 7 is asserted to be in allowable condition.

Also, the protective quartz shield of Donahue is for protecting the UV light bulb or lamp from damage; similarly, Veloz does not include an interface device for providing protection to appliance components as set forth in claim 5. The quartz plate of Veloz is intended for protection of the light bulb (col 3, line51-64). Significantly, according to the present invention, "Preferably, the interface device is UV transmissive, such that UV light may pass through it. More preferably, the interface device is an interface optical device or devices. These interface optical devices, or portal optics, control and direct the UV light in order to enhance the disinfection of the appliance or container interior 24." (p. 5, line 19 specification of present invention).

The evaporation plate of Donahue is taught to be heated such that the heating of the evaporation plate causes volatile contaminants to leave the oil (Abstract).

Also, significantly, Donahue provides for the housing to be partially filled with filter material 14, which may be cotton fibers or lint, which would prevent the UV radiation from being reflected or otherwise passing throughout the housing to sterilize the fluid within the housing (col. 2, line 38-40). As such, Donahue teaches away from the present invention.

By contrast, the present invention is directed to a portal-based appliance system for ultraviolet disinfection (UV) of interior surfaces and contents of containers for receiving UV light input into the container from a UV light source. The systems of Donahue and Veloz teach away from the present invention as set forth in independent claim 1 and claim 20, now amended to more particularly set forth the present invention.

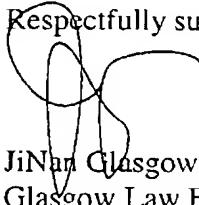
CONCLUSION

In view of the foregoing, Claims 1-31, now amended, constituting the claims pending in the application, are submitted to be fully patentably and allowable. If any issues remain outstanding, incident to the allowance of the application, Examiner Strecker is respectfully requested to contact the undersigned attorney at (919)-664-8222 or via email at jinang@trianglepatents.com if any issues remain, in order that prosecution of the application may be concluded favorably to the applicant, consistent with the applicant's making of a substantial advance in the art and particularly pointing out and distinctly claiming the subject matter that the applicant regards as the invention.

A request for extension of time is hereby requested and the appropriate fee for the extension of time is enclosed herewith.

This formal Office action response is being submitted via fax to the official group fax number 703-308-4357 on November 21, 2003.

Respectfully submitted,



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